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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,006	04/17/2006	Yong-Min Lee	CU-4773 RJS	8807

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EXAMINER

PATEL, MUNJALKUMAR C

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,006	Applicant(s) LEE ET AL.	
	Examiner Munjal Patel	Art Unit 4113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 1-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/27/08, 06/24/08, 06/13/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Regarding claims 1-9, the word "means" is preceded by the word(s) "comprising" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).
2. For the sake of compact prosecution examiner interprets claims are in proper format and provides first action on merits. Appropriate corrections are required without changing the scope of the claim and by not adding new subject matter.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Karabinis (US PAT # 5,937,332 date of patent Aug, 10, 1999).
5. **Regarding claim 1**, Karabinis discloses a satellite telecommunication repeaters and retransmission method which reads on an apparatus for repeating a signal from a satellite to a mobile station in a shadow area (Karabinis: Abstract & Fig 2-7, Column 1 lines [17-32] ,[46-60], column 4 lines [61-67]) the apparatus comprising:

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means for receiving the signal (Karabinis: Fig 2: 210) and amplifying the received signal (Karabinis: Fig 2:250);

means for radiating the amplified signal (Karabinis: Column 5 lines [11]) to the shadow area (Karabinis: Column 4 lines [65]); and

means for feeding the amplified signal to the radiating means (Karabinis: Fig 2 & column 5 lines [6-21] describes the process where repeater receives signal, amplifies it and retransmits to the mobile station which provides means for feeding the amplified signal to the radiating means).

6. **Regarding claim 2**, Karabinis discloses everything in claim 1 as above along with the receiving means includes:

a microstrip patch array antenna (Karabinis: Fig 2: 210 is patch array antenna i.e. micro strip patch array antenna according to wikipedia) for receiving the signal from the satellite; and an amplifier for amplifying the received signal (Karabinis: Fig 3:250 & 280); from the micro strip patch array antenna (Karabinis: Fig 2: 210).

7. **Regarding claim 3**, Karabinis discloses everything in claim 2 as above along with the radiating means is installed in the shadow area (Karabinis: Column 4 lines [65]).

8. **Regarding claim 4**, Karabinis discloses everything in claim 2 as above along with the microstrip patch array antenna (Karabinis: Fig 2: 210) and the amplifier (Karabinis: Fig 3:250 & 280) are implemented as one piece (Karabinis: Fig 2 & 3) and further includes a probe (Karabinis: Fig 3: connecting probe is between 170 to 250 &

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280) for transiting the signal received from the microstrip patch array antenna to the amplifier.

9. **Regarding claim 5**, Karabinis discloses everything in claim 1 as above along with the radiating means is one directional (Karabinis: column 5 lines [55-57] describes downlink signal received from one or more satellites, hence one directional antenna or multi directional antenna is used) micro strip patch array antenna (Karabinis: Fig 2: 210).

10. **Regarding claim 7**, Karabinis discloses everything in claim 1 as above along with the receiving means is located at a position where a line of sight to the satellite (Karabinis: Fig 2:110 & 210 are in line of sight) is secured.

11. **Regarding claim 8**, Karabinis discloses everything in claim 1 as above along with the radiating means includes:

a dual directional antenna provided with a first micro strip patch array antenna (Karabinis: Fig 2: 210 & column 5 lines [55-57] describes downlink signal received from one or more satellites, hence dual directional antenna)

and a second micro strip patch array antenna (Karabinis: Fig 3:290 column 6 lines [3-5]); and

means for dividing the signal (Karabinis: Fig 3:270) received from the receiving means to a first portion and a second portion (Karabinis: Column 5 lines [64-67], and passing the first portion to the first micro strip patch array antenna and the second portion to the second micro strip patch array antenna (Karabinis: Column 6 lines 1-10 describes transmitting the signal to multiple radio telephones 120 using multi directional antenna)

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Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 6, 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over description of Karabinis.

14. **Regarding claim 6 & 9**, Karabinis discloses everything in claim 5 as above, however Karabinis fails to disclose apparatus's intended use specifically as shadow area being overpass or underpass. However, examiner maintains that it was well known in the art at the time of invention to interpret shadow area as underpass or overpass.

15. Karabinis describes shadow area as signals into buildings, foliage, transportation vehicles, and other objects which can reduce link margin (Karabinis: column 2 lines [6—65]), it is obvious to one ordinary in the art to interpret it as underpass or overpass as in both situation it reduces link margin of the apparatus disclosed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Munjal Patel whose telephone number is (571)270-5541. The examiner can normally be reached on Monday - Thursday 9:00 AM - 7:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jefferey Harold can be reached on 571-272-7519. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Munjal Patel
Examiner
Art Unit 4113

/MP/
/Jefferey F Harold/
Supervisory Patent Examiner, Art Unit 4113